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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------------|---------------------|------------------|
| 09/837,951 | 04/19/2001 | Antonio Jose de Araujo Porto | | 1254 |

7590

04/04/2003

Dr. Max Fogiel
61 Ethel Road West
Piscataway, NJ 08854

EXAMINER

NGUYEN, TRINH T

ART UNIT

PAPER NUMBER

3726

~~DATE MAILED: 04/04/2003~~

RE 6/9/04 #19

Please find below and/or attached an Office communication concerning this application or proceeding.



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Office Action Summary

Application No.

09/837,951

Applicant(s)

PORTO ET AL. *MF*

Examiner

Trinh T Nguyen

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on CPA(2/3/03) & Pre.Amend.(3/28/03).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) <i>Attached</i> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Continued Examination under 37 CFR 1.114 After Final Rejection

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/3/03 has been entered (note that only the Continued Prosecution Application (CPA) Request Transmittal is entered and that the Amendment filed on 12/31/02 was cancelled and replaced with the Preliminary Amendment faxed on 3/28/03 (see attached Interview Summary for further explanation)).

Preliminary Amendment

2. The preliminary amendment faxed on 3/25/03 is in the proper format and an action on the merits follows.

Claim Rejections – 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3726

4. Claims 16-18, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Berchem (US 4,662,047).

Berchem teaches a method of manufacturing a piston for an internal-combustion engine by preliminarily forging (step A) a blank to specific contours to form a preliminarily shaped piston (1a as shown in Fig. 1) and then subsequently forging (step B) the preliminarily shaped piston to create additional contours (2a of 1b as shown in Fig. 2) along one other. Note that Berchem's method does teach a method of boring through sides of the piston independent of the manufacturing steps A & B for receiving a sleeveless bolt (see lines 16-23 of col. 4 and Figures 4 & 5). Further note that Berchem's method does teach a method of forming a piston or piston component by two separate forging step wherein each step resulting a different contour along a different axis (see lines 5-55 of col. 2, lines 50-62 of col. 3 and lines 1-30 of col. 4).

Regarding claim 17, Berchem's method does teach preliminarily shaping the blank along a longitudinal axis of the blank.

Regarding claim 18, note Berchem's blank can be interpreted as a rod-like blank and that the blank is upsetted to form a skirt (2 and/or 3 in Fig. 1) and a cavity (the area between 4 in Fig. 1). As shown in Fig. 2, note that contours (2a, 6, 7 and/or 8) are shaped onto the skirt (2 and/or 3 in Fig. 1) "along a longitudinal axis of the skirt in vicinities of inner and outer circumferences and of upper and lower faces of the skirt".

Regarding claim 21, note that Berchem's preliminarily shaped piston has a reducible wall thickness (note that during the forging process at least one of the wall of

Art Unit: 3726

the spaced piston will be reduced in thickness) and reinforcements (2a, or 6, or 8 in Fig. 2) during the subsequent manufacturing step (B).

Regarding claim 22, note that Berchem's method does include shaping the skirt on one of the two forging steps.

Regarding claim 23, note that Berchem's blank is made out of steel (see line 9 of col. 2).

Regarding claim 24, note that Berchem's method does include reforming (by a piercing tool or embossing tool) the piston.

Regarding claim 25, note that Berchem's method does include removing excess material (see lines 24-25 of col. 4) and producing recesses by punching (see lines 55-62 of col. 3 and lines 3-15 of col. 4).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berchem (US 4,662,047).

Regarding the limitation for using the same forging tool in both forging steps as claimed in claim 20 and 26, it is noted that whether one chooses to use the same forging tool or another different forging tool is a matter of design choice since there isn't any new or unexpected result obtained, and it appears that the invention would perform

Art Unit: 3726

equally well by using the same or different forging tool as taught by the prior art.

Further noted that heating a blank material before inserting it into a forging tool is an inherent technique that one must carry out in a forging process.

Regarding the limitation for forging at approximately 90 degree to the first prescribed axis as claimed in claims 19 and 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to forge at approximately 90 degree relative to a first axis, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

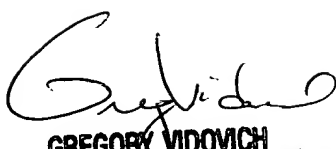
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich can be reached on (703) 308-1148. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

Application/Control Number: 09/837,951
Art Unit: 3726

Page 6

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March 31, 2003


GREGORY VIDOVICH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700